

PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE



In the **PATENT APPLICATION** of:

Kwak et al.

Application No.: 10/644,361

Confirmation No.: 6406

Filed: August 20, 2003

For: EFFICIENT JOINT DETECTION

Group: 2611

Examiner: Vineeta S. Panwalker

Our File: I-2-304.1US

Date: April 13, 2007

SUPPLEMENTAL INFORMATION DISCLOSURE STATEMENT

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

Further to Applicants' Duty of Disclosure pursuant to 37 C.F.R. §1.56, Applicants wish to bring to the Examiner's attention the material cited on the enclosed Form PTO-1449.

The listed references include references previously cited in this application. Newly cited documents are indicated by an asterisk (*) on the enclosed Form PTO-1449. Copies of the newly cited documents are enclosed. Pursuant to 37 C.F.R. §1.98(a)(2)(ii), copies of the newly cited U.S. publications and/or patent documents have not been included.

04/17/2007 SSESHE1 00000060 090435 10644361

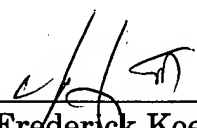
02 EC:1464 139.00 DA

Applicant: Kwak, et al.
Application No.: 10/644,361

It is respectfully requested that the Examiner consider these documents and return an initialed copy of the Form PTO-1449 indicating his consideration of the cited materials.

Respectfully submitted,

Kwak et al.

By 
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Enclosures



FORM PTO-1449 U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Use several sheets if necessary)	ATTY. DOCKET NO. I-2-0304.1US	SERIAL NO. 10/644,361
	APPLICANT Kwak, et al.	
	FILING DATE August 20, 2003	GROUP 2611

U.S. PATENT DOCUMENTS

EXAMINER INITIAL		DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
		6,144,711	11/2000	Raleigh et al.			
		6,208,295	03/2001	Dogan et al.			
		6,252,540	06/2001	Hale et al.			
		6,370,129	04/2002	Huang			
	*	6,424,596	07/2002	Donald			
	*	6,625,203	09/2003	De et al.			
	*	6,952,460	10/2005	Van Wechel et al.			
	*	2002/0146078	10/2002	Gorokhov et al.			

FOREIGN PATENT DOCUMENTS

		DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION	
							YES	NO
		99/40698	08/1999	WO				

OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)

		Klein et al., "Zero Forcing and Minimum Mean-Square-Error Equalization for Multiuser Detection in Code-Division Multiple-Access Channels," IEEE Transactions on Vehicular Technology, Vol. 45, No. 2, May 1996.
		Klein, "Data Detection Algorithms Specially Designed for the Downlink of CDMA Mobile Radio Systems," IEEE 47 th Vehicular Technology Conference, Phoenix, Arizona, US, May 1997.
		Karimi et al., "A Novel and Efficient Solution to Block-Based Joint-Detection Using Approximate Cholesky Factorization," Motorola GSM Products Division, Swindon, UK, 1998.

EXAMINER	DATE CONSIDERED
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EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.



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		PA Consulting Group/Racal Instruments Ltd., "Low Cost MMSE-BLE-SD Algorithm for UTRA TDD Mode Downlink," ETSI STC SMG2 Layer 1 Expert Group, Helsinki, Finland, September 1998.	
		Klein et al., "Linear Unbiased Data Estimation in Mobile Radio Systems Applying CDMA," IEEE Journal on Selected Areas in Communications, Vol. 11, No. 7, September 1993.	
		Benvenuto et al., "Joint Detection with Low Computational Complexity for Hybrid TD-CDMA Systems," Vehicular Technology Conference, 1999, VTC IEEE VTS 50 th , Amsterdam, The Netherlands, September 1999.	
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		Lee et al., "A Fast Computation Algorithm for the Decision Feedback Equalizer," IEEE Transactions on Communications, Vol. 43, No. 11, November 1999.	
	*	Vollmer et al., "Comparative Study of Joint-Detection Techniques for TD-CDMA Based Mobile Radio Systems", IEEE Journal on Selected Areas in Communications, IEEE, Vol. 19, No. 8, August 2001, pp. 1461-1475.	
	*	Pan et al., "Low Complexity Data Detection Using Fast Fourier Transform Decomposition of Channel Correlation Matrix", 2001 IEEE Global Telecommunications Conference, Vol. 2 of 6, November 2001, pp. 1322-1326.	
	*	3G TS 25.221 V3.2.0, 2000-03, "ULTRA (TDD) physical channels and mapping of transport channels onto physical channels," 3 rd Generation Partnership Project, Technical Specification Group RAN WG1. (www.3gpp.org).	
	*	3G TS 25.221 V4.0.0, 2001-03, "ULTRA (TDD) physical channels and mapping of transport channels onto physical channels," 3 rd Generation Partnership Project, Technical Specification Group RAN WG1. (www.3gpp.org).	
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	*	J. Blanz, A. Klein, M. NaBhan, and A. Steil, "Performance of a cellular hybrid C/TDMA mobile radio system applying joint detection and coherent receiver antenna diversity," IEEE. J. Select. Areas Commun., Vol. 12, pp. 568-579, May 1994.	

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	*	G.K. Kaleh, "Channel equalization for block transmission systems," IEEE J. Select. Areas Commun., Vol. 13, pp. 110-120, Jan. 1995.	
	*	P. Jung and J. Blanz, "Joint detection with coherent receiver antenna diversity in CDMA mobile radio systems," IEEE Trans. Veh. Technol., Vol. 44, pp. 76-88, Feb. 1995.	
	*	N. Benvenuto and G. Sostrato, "Joint detection with low computational complexity for hybrid TD-CDMA systems," IEEE J. Select. Areas Commun., Vol. 19, pp. 245-253, Jan. 2001	
	*	M. Vollmer, J. Götze, M. Haardt, "Joint-Detection using Fast Fourier Transforms in TD-CDMA based Mobile Radio Systems." International Conference on Telecommunications, Cheju, Korea, June 1999.	

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